DOCUMENT RESUME

ED 399 450 CE 072 589

AUTHOR Houser, James, Ed.
TITLE Vocational Education Data in the U.S. Department of Education, 1996. Third Biennial Report to Congress.
INSTITUTION National Center for Education Statistics (ED), Washington, DC.
PUB DATE 96
NOTE 18p.; Prepared by the Data Development and Longitudinal Studies Group.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Agency Role; *Data Collection; *Information Dissemination; Information Sources; Postsecondary Education; Program Improvement; *Public Agencies; Secondary Education; *Vocational Education
IDENTIFIERS *Department of Education

ABSTRACT

Four agencies are involved in the U.S. Department of Education's vocational education data collection and reporting activities, as mandated by the 1990 Perkins Act: National Center for Education Statistics (NCES); Office of Vocational and Adult Education (OVAE); National Institute of Postsecondary Education and Lifelong Learning (NIPELL); and Office of the Under Secretary (OUS). NCES, NIPELL, and OUS primarily provide data for use in formulating policy, whereas OVAE primarily collects and reports data for use in program administration. In its capacity as the Department of Education's statistical agency, NCES collects and reports general-purpose education statistics that are often relevant to vocational education (for example, information on issues such as whether enrollment is declining and whether students with disabilities take the same amount of advanced vocational courses as students without disabilities do). Both NIPELL and OUS staff conduct major studies of federal education programs, whereas OVAE monitors vocational programs by collecting data through its performance and financial status reports. In compliance with its mandate under the 1990 Perkins Act, the Department of Education has prepared a biennial report detailing its strategies and activities to improve the data collection and reporting activities of NCES, OVAE, NIPELL, and OUS. (MN)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

ED 399 450

CE

# VOCATIONAL EDUCATION DATA IN THE U.S. DEPARTMENT OF EDUCATION, 1996

## THIRD BIENNIAL REPORT TO CONGRESS

*Mandated by the:*
CARL D. PERKINS VOCATIONAL EDUCATION ACT,
AS AMENDED BY THE
CARL D. PERKINS VOCATIONAL AND
APPLIED TECHNOLOGY ACT AMENDMENTS OF 1990

*Prepared by the:*
NATIONAL CENTER FOR EDUCATION STATISTICS (NCES)
DATA DEVELOPMENT AND LONGITUDINAL STUDIES GROUP

*Edited by:*
JAMES HOUSER
DATA DEVELOPMENT PROGRAM

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

CE 072 589



BEST COPY AVAILABLE

## INTRODUCTION

The purpose of this report is to respond to the mandate under Section 421(f) of the Carl D. Perkins Vocational Education Act (20 USC 2421), as amended by the Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1990 (hereafter referred to as the 1990 Perkins Act). This provision requires the Secretary to report biennially to Congress with respect to:

- the performance of the Department of Education's vocational education data collection and reporting activities; and
- strategies to improve these activities.

The vocational education data are derived from general purpose surveys conducted throughout the Federal government and constitute a data system. The data system also includes nationally representative data collected outside the Federal government. The system is referred to as the Data on Vocational Education (DOVE) plan. Since the DOVE plan is based on a number of general purpose surveys that collect information on vocational education in the context of the entire educational enterprise -- instead of a single survey that specifically addresses vocational education -- the system is a derived one. The DOVE plan thus treats vocational education as part of education as a whole. This approach allows researchers to draw comparisons between vocational and non-vocational students and teachers.

While the National Center for Education Statistics (NCES) reports and collects data on vocational education, other components of the Department of Education, including the Office of Vocational and Adult Education (OVAE); the National Institute of Postsecondary Education and Lifelong Learning (NIPELL); and the Office of the Under Secretary (OUS), are also involved in collecting and reporting data on vocational education. NCES, NIPELL, and OUS primarily provide data for use in formulating policy. OVAE, which administers programs under the 1990 Perkins Act, primarily collects and reports data for use in program administration.

NCES, the Department of Education's statistical agency, collects and reports general purpose education statistics. For instance, the NCES 1990 High School Transcript Study has enabled researchers to address such issues as whether enrollment in vocational education is declining and whether students with disabilities take the same amount of advanced vocational courses as students without disabilities. Both NIPELL and OUS staff conduct major studies of Federal education programs, such as the Chapter 1 program and the vocational education programs. NIPELL staff members conducted the National Assessment of Vocational Education Programs mandated by the 1990 Perkins Act prior to the creation of the institute, when they were part of the Office of Research. OUS conducts program evaluations in the Department of Education, such as the assessment of vocational education

mandated by the 1984 Perkins Act. OVAE collects data through its performance and financial status reports to monitor programs under the 1990 Perkins Act.

The remainder of this report describes the data collection and reporting activities in each of these components of the Department.

## NATIONAL CENTER FOR EDUCATION STATISTICS

NCES is located in the Office of Educational Research and Improvement (OERI) and is the Department of Education's statistical agency. This section describes NCES' activities to improve data collection and reporting related to vocational education.

### Activities to Improve Data Collection

The approach used by the DOVE plan, which is discussed in the introduction, is supported by the 1990 Perkins Act. Section 421(e)(1) of the Act states that:

> In establishing, maintaining, and updating the system, the Secretary shall --
>
> (A) use existing data collection systems operated by the Secretary and, to the extent appropriate, data collection systems operated by other Federal agencies;
>
> (B) conduct additional data collection efforts to augment the data collection systems described in subparagraph (A) by providing information necessary for policy analysis required by this section; and
>
> (C) use any independent data collection efforts that are complementary to the data collection efforts described in subparagraphs (A) and (B).

Since NCES collects data on vocational education as part of its general purpose surveys, NCES is able to place vocational education in the context of all education and draw comparisons between both vocational and non-vocational students and teachers. NCES has occasionally conducted one- or two-page surveys of vocational teachers or state directors of vocational education as independent data collections to complement its data collection using general purpose surveys.

NCES has undertaken two major initiatives to improve data collection related to vocational education. They are:

- co-sponsoring a professional working group to study vocational education data needs; and
- reviewing all NCES surveys to add and improve items on vocational education.

**Professional Working Group**. NCES and the Office of Vocational and Adult Education (OVAE) co-sponsored a study of vocational

education data needs by the National Center for Research on Vocational Education (NCRVE). NCRVE established a professional working group that provided an opportunity for representatives of government agencies, as well as groups that have a strong interest in vocational education, such as vocational student organizations and associations for the disabled, to comment on the Department's data collection plans as a whole. The group issued a final report on this activity, Improving National Data for Vocational Education: Strengthening a Multiform System. The report endorses the DOVE plan and the collection of data on vocational education as part of general purpose surveys. One area the report indicated could be improved is the timing of data collection on vocational education. Currently, NCES' longitudinal studies do not always coincide with reauthorization cycles of the Perkins Act since the data are used for general purpose statistics.

**Questionnaire Review.** NCES also involves individuals knowledgeable about vocational education in its regular process of reviewing its draft survey instruments. After the design and objectives of a survey have been established, NCES staff, and often individuals outside of NCES, review survey instruments. NCES has routinely involved staff from NCRVE and OVAE in this review.

**Activities to Improve Data Reporting**

NCES includes data on vocational education in publications, such as the Digest of Education Statistics, that do not address vocational education as a primary objective. NCES also releases data via printed reports or diskettes that focus on vocational education to help make data more readily available to individuals who are primarily interested in vocational education.

NCES has released several publications and a computer data diskette on vocational education since the Perkins amendments were enacted.

- **Vocational Education in the United States: The Early 1990s** synthesizes data on students' participation in vocational education, vocational teachers, and vocational schools from surveys conducted by NCES, the Census Bureau, and the National Assessment of Vocational Education. This publication is the second in its series, with the first being Vocational Education in the United States: 1969-1990.

- **Vocational Coursetaking and Academic Achievement: An Analysis of High School Transcripts and 1990 NAEP Assessment Scores** examines the relationship between vocational coursetaking and academic achievement as measured by the 1990 National Assessment of Educational Progress.



BEST COPY AVAILABLE

- **Trends in Participation in Secondary Vocational Education: 1982-92** examines how participation trends in vocational education have changed for students during this time period. This publication updates Participation in Secondary Vocational Education, 1982-1987.

- **NCES Vocational Electronic Table Library, 1996** compiles tables from several recent NCES publications on a computer disk that allows individuals to search for data using key words. This is the second electronic table library NCES has created. NCES Vocational Electronic Table Library is the first.

- **Vocational Education in the United States: 1969-1990** synthesizes data on students' participation in vocational education, vocational teachers, and vocational schools from most NCES surveys. This publication was the first major synthesis of vocational education data by NCES since 1981 and the start of a new series of publications.

- **A Comparison of Vocational and Nonvocational Public School Teachers in Grades 9 to 12** uses data from the 1987-88 Schools and Staffing Survey (SASS) to compare and contrast the demographic characteristics and educational backgrounds of vocational and nonvocational teachers.

- **Participation in Secondary Vocational Education, 1982-1987** examines changes in participation in secondary vocational education between 1982 and 1987 using data from High School and Beyond (1982) and the 1987 High School Transcript Study.

- **Public Secondary School Teacher Survey on Vocational Education** reports data from a survey of teachers that was requested by the National Assessment of Vocational Education authorized by the 1990 Perkins Act. The survey reports on policy initiatives in the 1990 Perkins Act, such as integrating vocational and academic education.

- **NCES Vocational Electronic Table Library** is a computer diskette that includes over 100 tables from NCES' publications on vocational education. Users can search for data they are interested in seeing by typing in key words.

- **Vocational Education in G-7 Countries: Profiles and Data** describes the vocational education systems in the G-7 countries -- Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States. This report also discusses the availability and adequacy of comparable data on vocational education in the United States and its major trading partners.

NCES plans to issue additional publications and products on vocational education that will address the following topics:

- an update of vocational education in the United States (the third in the series); and
- an issue brief with highlights from Vocational Education in the United States: The Early 1990s.

## NATIONAL INSTITUTE ON POSTSECONDARY EDUCATION AND LIFELONG LEARNING

The National Institute on Postsecondary Education and Lifelong Learning (NIPELL) is a unit within the Office of Educational Research and Improvement with responsibility for conducting research related to vocational education. The Office of Research, which existed prior to the reorganization that created NIPELL and other research institutes, was the unit in the Office of Educational Research and Improvement that conducted the National Assessment of Vocational Education Programs. This assessment was mandated by Section 403 of the 1990 Perkins Act. It evaluates the current status of vocational and occupational education, including the implementation of provisions of the 1990 Perkins Act. This section describes the topics the assessment addresses, the methods used to address them, and the timing of the reports that release the findings from the assessment.

### Major Subject Areas to be Addressed by the Assessment

The assessment addresses four major subject areas, which include all of the issues mandated under the 1990 Perkins Act. The broad subject areas are:

- the implementation and, where possible, effects of the 1990 Perkins Act, including the allocation of funds;
- participation of special populations in vocational education;
- the quality of vocational education programs; and
- vocational education and employment.

**Implementation**. The 1990 Perkins Act was intended to promote major reforms in vocational education. Because of the limited time period covered by the assessment, the assessment does not determine definitively whether these reforms are successful. However, it examines the processes of implementing provisions of the 1990 Perkins Act, gauges the progress of states and localities in achieving goals of the legislation, and identifies the effects of the Act insofar as they are observable by the spring of 1993. Examples of questions that address implementation of the 1990 Perkins Act include: 1) What steps are being taken to develop and implement performance standards? 2) What services are provided to special populations? and 3) What are states and localities doing to implement provisions of the Act?

**Participation of Special Populations**. Participation of special populations in vocational education has been a continuing emphasis of Federal policy, but the 1990 Perkins Act changes the

approach: The 1990 Perkins Act eliminates set-asides for some groups, such as students with disabilities and the limited English proficient. Examples of how the assessment studies the participation of special populations include comparing participation rates of special and general populations at both the secondary and postsecondary levels and using longitudinal data to determine the employment outcomes of special education students who participate in vocational education.

**Program Quality**. The assessment also addresses three questions related to the quality of vocational education: 1) How well qualified are teachers of vocational education? 2) What is the quality of course materials used? and 3) What are the academic outcomes of vocational education?

**Employment Outcomes.** Employment is an important outcome of participation in vocational education. The assessment examines the school-to-work transition efforts, employment outcomes of vocational students, the relevance of vocational training to subsequent occupations, and employer involvement in and satisfaction with vocational education.

## Methods Used in the Assessment

The Office of Research used a variety of methods in the study. The assessment conducted surveys and case studies, analyzed NCES data, reviewed existing literature, and used studies conducted by research centers funded by the Department of Education.

- Surveys were conducted of secondary and postsecondary schools, school districts, state directors of vocational education, teachers, education directors of juvenile correctional facilities, advisors to vocational student organizations, and employers. The surveys provide nationally representative data.

- Community-based case studies were conducted at 20 sites across the country. Another set of case studies was conducted on tribal schools that receive Perkins funds. A third set of case studies examined changes in schools that received much higher and much lower Perkins allocations in the 1991-92 school year than in the previous year. These case studies provide in-depth information not easily obtained from a national survey.

- The Office of Research examined student participation, academic outcomes, and teacher qualifications using NCES data sets, such as the National Assessment of Educational Progress, the National Postsecondary Student Aid Study, and the Schools and Staffing Survey.

- A series of literature reviews was conducted to address broad issues in vocational education, such as teacher training, contextual learning, and the changing needs of the workforce.

- The following studies by research centers funded by the Department of Education were used.

  - NCRVE studied reforms from the 1990 Perkins Act, such as the integration of academic and vocational education, performance standards and measures, and the school-to-work transition.

  - The Center on the Educational Quality of the Workforce examined the employment outcomes of vocational education by linking state unemployment insurance data with school records.

  - The Finance Center of the Center for Policy Research in Education studied the interstate funding formula for distributing Perkins funds to states.

**Reports**

The interim report for the assessment was delivered to Congress on December 30, 1993. The final report was delivered to Congress on June 30, 1994.

## OFFICE OF THE UNDER SECRETARY

The Planning and Evaluation Service (PES) in the Office of the Under Secretary, is responsible for analyses and evaluations of a number of cross-cutting education issues and program areas. PES conducts evaluations of Departmental program operations in vocational education. In 1989, it produced the National Assessment of Vocational Education (NAVE), which made recommendations for the 1990 reauthorization of the Perkins Act. PES has completed or is currently conducting several evaluations of vocational education programs.

### Completed Studies

PES has completed several studies on vocational education since the 1990 Perkins Act was enacted.

- **Training and Housing in Tribally Controlled Postsecondary Institutions.** The study of training and housing needs within tribally controlled vocational institutions, authorized by the 1990 Perkins Act, provides a detailed description of the quality of the student housing and the training facilities and equipment of Crownpoint Institute of Technology (Crownpoint, New Mexico) and United Tribes Technical College (Bismarck, North Dakota), and a 5-year economic projection of the training facilities, equipment, and housing needs for each institution. Study findings will assist the institutions in planning for future training and housing needs. A final report and a companion report on the 5-year economic development plans of the institutions are available.

- **Dropout Prevention.** The evaluation of dropout prevention and re-entry demonstration projects is a study of ten demonstration projects funded in 1988 by the Office of Vocational and Adult Education under the Cooperative Demonstration Program of the Perkins Act. The evaluation: (1) determines the effectiveness of projects in reducing dropping out and the at-risk behaviors and attitudes associated with dropping out; (2) analyzes student outcomes as a function of the services the projects provide during the grant period; and (3) examines factors that affect project implementation, which will facilitate adopting or adapting specific dropout programs in other locations and for other students. The final report is available.

- **High Technology Cooperative Demonstration Programs.** The evaluation of the Cooperative Demonstration Program (High Technology) provides a descriptive review of high technology projects funded in Fiscal Year 1988 and an in-depth assessment of the projects funded in Fiscal Year 1989. The study was guided by three questions: (1) to what extent are

the Cooperative Demonstration Program project designs for high technology amenable to rigorous evaluation; (2) to what extent have those designs been successfully implemented; and (3) are project costs reasonable in relation to actual or projected outcomes. The final report is available.

- **Secondary Vocational Education: Availability, Coursetaking, and Outcomes**. This publication presents information about policy and practice within secondary vocational education and is divided into three main chapters. The first presents information about regional, district, and school-level availability of vocational education and the institutions that provide it. The second chapter is an extended exploration of coursetaking patterns in academic and vocational education from the high school class of 1969 to the high school class of 1987. The third chapter examines two sets of outcomes of vocational education -- mathematics achievement and early labor market experience. The report does not provide a set of conclusions or recommendations.

- **Measuring Employment Using Unemployment Insurance Data**. In vocational education, as in other areas of education, assessment of student performance is increasingly viewed as a way to measure program quality and to motivate program improvement. Job placement and earnings are two of the basic outcomes of interest in any program designed to prepare students for work. Educational institutions have traditionally collected such information through surveys of their graduates, but the results reported are widely considered to be unreliable. Policymakers and program administrators have sought new ways to improve the measurement of employment outcomes for students participating in vocational programs. This study explores the feasibility of using state unemployment insurance (UI) wage record data and other routinely maintained state and Federal data. Unlike school surveys, the UI data do not suffer from low response rates (over 90 percent of civilian employees are covered), are not subject to faulty recall by respondents, and entail no new data collection burden on respondents. The final report is available.

- **Assessing Student Outcomes in Postsecondary Vocational Education: An Overview of State Policies**. This study surveyed states to obtain information on the state policies and practices regarding collection and use of student performance data. The final report is available.

- **Characteristics of Students Attending Proprietary Schools**. This study analyzed data in NCES' National Postsecondary Student Aid Study to compare the demographic characteristics of students attending proprietary schools with students

enrolled in occupational programs at community and technical colleges. The final report is available.

- **Beyond Defaults: Indicators for Assessing Proprietary School Quality**. This paper, prepared for the last reauthorization of the Higher Education Act in 1992, examines alternatives to the Department's reliance on student loan default rates as a criterion for judging institutional quality and eligibility for Federal Student Aid programs.

- **Preparing for the Workplace: Charting A Course for Federal Postsecondary Training Policy**. This National Academy of Science report reviewed evidence on the effectiveness of Federal education, job training and welfare policies and considered a range of alternatives for the design and delivery of workforce development training.

**Current Study**

- **Evaluation of the Technology-Preparation Education Program**. This study will provide a comprehensive picture of state and local technology-preparation programs and activities implemented by Title III Part E (tech-prep education) funds and identify best practices and effective approaches of local programs. The evaluation will examine a broad range of issues that are typically associated with tech-prep including coordination and articulation; integration of academic and vocational education; career development; and involvement of business, industry, and labor. The study will produce a series of reports and statistical updates that highlight several of the study's major themes. A final report is expected September 1997.

## OFFICE OF VOCATIONAL AND ADULT EDUCATION

The Office of Vocational and Adult Education (OVAE) administers Public Law 101-392, the Carl D. Perkins Vocational & Applied Technology Education Act and, jointly with the Department of Labor, Public Law 103-239, the School-To-Work Opportunities Act. This section describes the data collection activities conducted by two of OVAE's divisions, the Division of Vocational-Technical Education (DVTE) and the Division of National Programs (DNP), as well as the National School-To-Work Office (NSTWO).

### Division of Vocational-Technical Education

The DVTE administers Title II (Basic State Grants) of the 1990 Perkins Act. To inform the Department about the status of states and their success in implementing the Perkins Act, DVTE annually conducts two data collections.

- **State Performance Reports** describe the progress states make in achieving the goals and objectives identified in their state plans. The state performance reports consist of narrative text and pertinent data, including data on program enrollments. Information in the report is organized around legislative initiatives and priorities, such as tech-prep education; performance standards and measures; special populations, which include students with disabilities and limited English proficiency; and the integration of academic and vocational education.

- **State Financial Status Reports** collect financial data on state-administered vocational-technical education programs. States record expenditures of Federal vocational-technical education funds by programmatic category in this report. Expenditures of non-Federal funds are also collected to determine compliance with maintenance of effort (i.e., maintaining the level of state expenditures on vocational-technical education) and matching fund requirements.

To improve and facilitate use of this information, DVTE developed an electronic database which allows for both minor manipulation of information in tables as well as a sophisticated text query mechanism by multiple users. DVTE anticipates that this information will eventually be available on-line to states for their use.

Information contained within these data collections has been analyzed and is available in two documents.

- **Program, Enrollment, and Financial Data Based Upon Perkins II** contains a national overview of student enrollment by program, gender, and special population, trend data, and summary data for each state.

- **Performance Standards and Core Measures** describes each state's system of performance standards and measures. In addition, this study provides a national snapshot of the development and implementation of performance measures systems by states mandated under Section 115 of the Act.

On-Site visits were completed between the fall of 1994 and the summer of 1995. DVTE conducted on-site visits to nine states to assess their compliance with all aspects of the Perkins Act. These visits addressed 11 major components of the Act: performance measures; financial distribution; local applications; tech-prep education; sex equity; special populations; state councils; community based organizations; consumer and homemaking education; the Department of Education's General Administrative Regulations; and general administration. Data and findings are compiled in individual state reports and in a comprehensive final report of the monitoring activity.

**Division of National Programs**

The Division of National Programs (DNP) supports national applied research; development and demonstration programs; and the National Center for Research in Vocational Education (NCRVE) through discretionary funding authorized by Title IV of the Perkins Act. The division has several major research projects.

- **Skill Standards**. The project involves 16 public-private partnerships that are identifying the skill needs of major industrial areas. In addition, the partnerships are developing voluntary skill standards that are compatible with world-class levels of industry performance. A final report, due in July 1997, will provide a comprehensive evaluation of the sixteen projects against a skill standards development framework.

- **Machine Tool Advanced Skills Technology Program**. This is an ongoing study of skills necessary for 15 occupations within the machine tool industry. In addition, the study is developing curriculum frameworks to provide training.

- **Performance Standards and Core Measures**. This study is a detailed analysis of states' performance measures and standards systems. The study assesses the validity, predictiveness, and reliability of various types of measures and standards. The study also evaluates the comparability of measures across states. A final report will be available in May 1996.

- **National Center for Research in Vocational Education**. Research by this center includes 16 national research studies covering changing skill demands, new curricular models, methods for serving special populations of students,

staff development, institutional collaboration, and performance measures and standards. Various research methodologies, such as quantitative and qualitative methods of inquiry, will be used in these studies.

**National School-to-Work Office**

The National School-To-Work Office (NSTWO) is a multi-agency team providing national leadership under the School-to-Work Opportunities Act for states to build self-sustaining school-to-work systems serving all students. To support this charge, the NSTWO is conducting research and data collection.

The NSTWO is developing progress and performance measures through a multi-phased research plan. The first phase focused on state-level school-to-work systems building and the implementation of school-to-work plans in each of the states initially funded under the Act. The second phase developed, through a collaborative process, a common group of participation indicators. Data collection began in February 1996. The report on the first phase was recently published.

The NSTWO database will contain three types of information which is collected biannually: (1) selected narrative; (2) performance measures; and (3) financial data.

Currently 27 states have funding from the NSTWO and will report data.

**ACKNOWLEDGEMENTS**

The third biennial report was prepared in the Data Development and Longitudinal Studies Group of the National Center for Education Statistics (NCES). Both Edith McArthur, Acting Director of the Data Development Program, and John Ralph, Acting Associate Commissioner for Data Development, provided general direction for the report. Overall direction was provided by Jeanne E. Griffith, Acting Commissioner for NCES.

Sandra Furey of the Office of the Under Secretary (OUS) wrote the section on OUS. Carol Griffiths of the Office of Vocational and Adult Education (OVAE) wrote the section on OVAE. Dave Boesel, who was serving as Acting Director of the National Institute on Postsecondary Education and Lifelong Learning when this report was being drafted, and Lisa Hudson, a former staff member of this institute, wrote the section on the Office of Educational Research and Improvement's (OERI) research activities. (These activities were carried out by the National Assessment of Vocational Education in the Office of Research prior to the creation of this institute in OERI.) James Houser of the Data Development Program in the Data Development and Longitudinal Studies Group wrote the remainder of the report and served as editor.